

Remarks

In view of the above amendments and the following remarks, favorable reconsideration of the outstanding office action is respectfully requested. Claims 1 – 30 remain in this application. Claim 1 has been amended. New claim 31 has been added.

1. § 102 Rejections

The Examiner has rejected claims 1 – 7, 14 – 25, 27 – 28, and 30 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,244,585 to Hiroshi et al. Applicants respectfully point out to the Examiner that there is no U.S. Patent No. 5,244,585 to Hiroshi. However, Applicants believe that the Examiner was referring to U.S. Patent No. 5,244,485 to Hihara et al. [hereinafter Hihara].

Claim 1, as currently amended, is directed to a method for forming an optical blank. The method includes the step of providing doped silica soot particles. The doped silica soot particles are spray-dried to form an agglomerate. The agglomerate is dry-pressed to form a green body. The agglomerate is disposed in a press mold during dry-pressing. A rod-like member is not disposed within the press mold during the step of dry-pressing. The green body is consolidated to form a glass object. The glass object is characterized by a substantially homogeneous index of refraction throughout the glass object. The glass object has substantially no striae disposed therein.

Hihara is directed to a method of manufacturing a silica glass preform. The method includes the steps of inserting a rod-like member, mainly containing a ductile material, into a forming space of a mold. The remaining space of the forming space is charged with a forming material containing silica glass powder or doped silica glass powder. The mold charged with the forming material is compressed from outside such as to form a porous glass body of the forming material around the rod-like member. The rod-like member is removed from the porous glass body. A glass rod is inserted into the hole formed after removal of the rod-like member. The porous glass body in which the glass rod is inserted is purified. Finally, the purified porous glass body is consolidated.

According to MPEP 2131, “to anticipate a claim, the reference must teach every element of the claim.” A claim is anticipated only if each and every element as set forth in

the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Newly amended claim 1 is not anticipated by Hihara because the reference does not teach every element of the claimed invention. Hihara is directed to a method for making a preform for optical fibers. The present invention is directed to a method for forming optical blanks for use as EUV microlithographic components. Hihara discloses a method whereby a ductile rod member is disposed within the mold. One disadvantage to the method employed by Hihara is the disposition of the ductile rod member within the mold. Claim 1 on the other hand, recites the step of dry-pressing the agglomerate to form a green body, the agglomerate being disposed in a press mold during dry-pressing, a rod-like member not being disposed within the press mold during the step of dry-pressing. Hihara does not anticipate this claim element. This is an important distinction because the disposition of a rod member in the agglomerate potentially introduces impurities.

In Hihara, after dry-pressing is complete, the rod is removed and an optical fiber preform is inserted into the resultant space in the preform. The preform represents the cladding and the optical fiber preform represents the core portion of the resultant fiber. Subsequently, the resultant consolidated object includes an inner core member having a first refractive index and an outer portion having a second refractive index. Claim 1 recites that by consolidating the green body, the resultant glass object is characterized by a substantially homogeneous index of refraction throughout the glass object. Hihara does not disclose this feature.

Claim 1 also recites that the consolidated glass object has substantially no striae. The Applicants respectfully point out that the introduction of the ductile rod in Hihara is problematic because the ductile rod introduces impurities in the preform object produced by the mold. These impurities result in striae being formed in the resultant glass object. On the other hand, because impurities are minimized in the method of the present invention, This feature is also recited in claim 1.

Accordingly, the Applicants respectfully assert that claims 1 – 7, 14 – 25, 27 – 28, and 30 are patentable under 35 U.S.C. § 102(b).

2. § 103 Rejections

The Examiner has rejected claims 8 – 13, 26 and 29 under 35 U.S.C. § 103 as being unpatentable for obviousness over U.S. Patent No. 5,244,585 to Hiroshi et al. in view of U.S. Patent No. 3,383,172 to Biegler et al. (hereinafter Biegler), or U.S. Patent No. 3,301,635 to Bergna et al. (hereinafter Bergna), or U.S. Patent No. 4,842,828 to Kreutzer et al. (hereinafter Kreutzer). Applicants respectfully point out to the Examiner that there is no U.S. Patent No. 5,244,585 to Hiroshi. However, Applicants believe that the Examiner was referring to U.S. Patent No. 5,244,485 to Hihara et al. [hereinafter Hihara].

According to the **MPEP 2143**, three basic criteria must be met to establish a *prima facie* case of obviousness. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

In this case, the combination of Hihara and Biegler, or Bergna, or Kreutzer does not teach or suggest all the claim limitations because amended claim 1 is not anticipated by Hihara for the reasons provided in Section 1. Neither Biegler nor Bergna nor Kreutzer remedy the deficiencies of Hihara with respect to claim 1. Thus, claims 8 – 13, 26 and 29 are allowable under 35 U.S.C. § 103 by virtue of their dependency from claim 1.

3. Conclusion

Based upon the amendments, remarks, and papers of record, Applicant believes the pending claims of the above-captioned application are in allowable form and patentable over the prior art of record. Applicant respectfully requests reconsideration of the pending claims 1 – 31 and a prompt Notice of Allowance thereon.

Applicant believes that a one-month extension of time is necessary to make this Response timely. Should Applicant be in error, Applicant respectfully requests that the Office grant such time extension pursuant to 37 C.F.R. § 1.136(a) as necessary to make this Response timely, and hereby authorizes the Office to charge any necessary fee or surcharge with respect to said time extension to the deposit account of the undersigned firm of attorneys, Deposit Account 50-0289.

Please direct any questions or comments to Daniel P. Malley at (607) 256-7307.

Respectfully submitted,

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